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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,273	07/11/2001	Michael J. Geile	100.070US27	1262

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EXAMINER

CUMMING, WILLIAM D

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/903,273

Applicant(s)

GEILE, ANDERSON, BREDE, &  
KIRSCHT

Examiner

WILLIAM D. CUMMING

Art Unit

2683

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-5 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-5 and 19-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 21 March 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2683.
2. The proposed drawing correction filed on March 21, 2003 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v). The objection to the drawings in the previous Office action of February 20, 2003, paragraphs 6 and 7 is NOT withdrawn.
3. Applicant's election without traverse of restriction in Paper No. 10 is acknowledged.
4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
5. Claims 27 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. As stated in previous Office actions in previous and co-pending applications, and not disputed by the applicant and/or applicant's attorney and/or assignee, deriving a probable bit error rate comprises the step of sampling a (meaning a single) parity bit for the payload channel is impossible.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 27 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification fails to provide an enabling disclosure the deriving a probable bit error rate comprises the step of sampling a parity bit for the payload channel, since it is impossible.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 19-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "*substantially evenly distributed*" in claims is a relative term which renders the claim indefinite. The term "*substantially evenly distributed*" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Something cannot be "*substantially evenly distributed*," it must be evenly distributed, or not. The examiner, for examination purposes only, shall take the subbands usually are not overlapping each other, but sometimes they do.

**10. Recent Statutory Changes to 35 U.S.C. § 102(e)**

On November 2, 2002, President Bush signed the 21st Century Department of Justice Appropriations Authorization Act (H.R. 2215) (Pub. L. 107-273, 116 Stat. 1758 (2002)), which further amended 35 U.S.C. § 102(e), as revised by the American Inventors Protection Act of 1999 (AIPA) (Pub. L. 106-113, 113 Stat. 1501 (1999)). The revised provisions in 35 U.S.C. § 102(e) are completely retroactive and effective immediately for all applications being examined or patents being reexamined. Until all of the Office's automated systems are updated to reflect the revised statute, citation to the revised statute in Office actions is provided. This also substitutes for any citation of the text of 35 U.S.C. § 102(e), if made, in the Office action.

The following is a quotation of the appropriate paragraph of 35 U.S.C. § 102 in view of the AIPA and H.R. 2215 that forms the basis for the rejections under this section made in the attached Office action:

**A person shall be entitled to a patent unless –**

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

35 U.S.C. § 102(e), as revised by the AIPA and H.R. 2215, applies to all qualifying references, except when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. For such patents, the prior art date is determined under 35 U.S.C. § 102(e) as it existed prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

The following is a quotation of the appropriate paragraph of 35 U.S.C. § 102 prior to the amendment by the AIPA that forms the basis for the rejections under this section made in the attached Office action:

**A person shall be entitled to a patent unless –**

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

**For more information on revised 35 U.S.C. § 102(e) visit the USPTO website at [www.uspto.gov](http://www.uspto.gov) or call the Office of Patent Legal Administration at (703) 305-1622.**

11. Claims 2, 3, 19-25, and 29-35, as understood, are rejected under 35 U.S.C. 102(e) as being clearly anticipated by **Timm, et al.**

**Timm, et al** disclose a telecommunication systems (figure 2d) with a multi-carrier transmission scheme comprising a head end (#2002) that transmits data over a transmission medium to the service units (#2014). A control circuit (#MUX FOR VIDEO, FOT) in the head end (#2002) that assigns each service unit (#2014) to a subband (*"Good portions of the overall bandwidth (those subbands with high signal-to-noise ratio (SNB)) are used to transmit symbols with a larger number of bits/symbol. An unequal number of bits are assigned to different subchannels, depending on the available capacity of each subchannel. Essentially, the data can be distributed among subchannels in a manner allowing very efficient use of the overall bandwidth."*) and allocate a payload channel (*"With actual throughputs lower than that provided by the VRDSL physical transmission Rink, traffic concentration can be realized at CO backbone networks. Statistical multiplexing can also be realized by using a separate analog front end for each CO VRDSL modem. The required number of corresponding digital portions can be less than the number of analog front-ends, depending on the traffic behavior. In the extreme case, the digital portion of the CO VRDSL modem can be multiplexed among active VRDSL links by using the voice-band as a traffic indicating channel and keeping a copy of the digital state portion of the modem inside RAM."*)

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 4, 26, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Timm, et al.**

**Timm, et al** disclose it can use common error corrections in their telecommunication system. **Timm, et al** does not disclose that their telecommunications is a hybrid fiber-coax telecommunications systems and bit error rates. The examiner takes Official Notice that hybrid fiber-coax telecommunications systems and deriving bit error rates is old and well known in the art. Hence, it would have been obvious to one ordinary skill in the art at the time the claimed invention was made to incorporate the use of is a hybrid fiber-coax telecommunications systems and bit error rates in the telecommunication system of **Timm, et al** in order to increase the over all bandwidth of the telecommunication system by adding fiber cables and to correct error during transmission of data.



If Applicants traverse this Official Notice, Applicants must remember admissions and/or statements in previous and/or co-pending applications made by representatives of applicants and assignee. If such traversal contradicts such previous admissions and/or statements, the examiner shall take this as intentional and willful delay of persecution by applicants.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Decker, et al** disclose speech and data multiplexor.

**DeSantis** discloses a variable bandwidth variable center frequency multibeam satellite switched router.

**Dapper, et al** show transport of payload information and control messages.

**Geile, et al** show dynamic bandwidth allocation.

**Fort** shows a multi-point to point communication system.

**Hill, et al** teach a channel selection for a hybrid fiber coax network.

**Brede, et al** display an acquisition and tracking system in a communication system.

**Roberts, et al** exhibit a hybrid fiber and coax video and telephony communications.

**Solum, et al** disclose a communication system with multicarrier telephony transport.

**Sarnikowski, et al** show computer data transmission over a telecommunications network.

**Ling, et al** teach a coding scheme for a wireless communication system.

**Litwin** discloses multicarrier modulation.

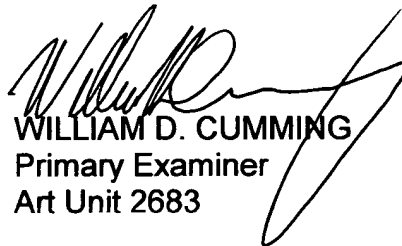
**Kim, et al** disclose a hierarchical wideband multicarrier CDMA systems.

### **USPTO Changes Correspondence Addresses**

**Under Secretary and Commissioner for Patents To Get New Addresses**

15. The Department of Commerce's United States Patent and Trademark Office (USPTO) is changing some of its mailing addresses so all correspondence will be routed through a United States Postal Service facility in northern Virginia, in preparation for its move to new office space in Alexandria, VA, beginning at the end of this year.
16. Effective May 1, 2003, the general address for the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, as well as for the Commissioner for Patents will be:  
  
PO Box 1450  
Alexandria, VA 22313-1450
17. The address for the Commissioner for Trademarks and other trademark-related correspondence will not change.
18. The USPTO has separate mailing addresses for other subject-specific correspondence. To determine the appropriate addresses for such correspondence, customers should check the USPTO Web site [www.uspto.gov](http://www.uspto.gov).
19. For additional information, refer to the Federal Register, Vol. 68, No.57  
<http://www.uspto.gov/web/offices/com/sol/notices/68fr14332.pdf>

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **WILLIAM D. CUMMING** whose telephone number is 703-305-4394. The examiner can normally be reached on Monday and Thursday 6:00am to 1:30pm, EDT.
21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **WILLIAM TROST** can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-6075 for regular communications and 746-6075 for After Final communications.
22. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

  
WILLIAM D. CUMMING  
Primary Examiner  
Art Unit 2683

wdc  
May 8, 2003



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